25/09/2024

Lab-0

① Program to print "Hello World"

```
class hello_world
{
  public static void main (String args[])
    {
      System.out.println ("Hello world");
    }
}
```

Output : Hello World

② Program to check if a number is prime or not.

```
class prime check {
  public static void main (String [args[])){
      int number = 29;
      boolean isPrime = true;
      if (number <= 1) {
      isPrime = false;
      } else {
          for (int i = 2; i <= Math.sqrt (number); i++) {
            if (number % i == 0) {
                isPrime = false;
                break;
              }
            }
        }
        if (isPrime) {
          System.out.println (number + " is prime no.");
        } else {
          System.out.println(number + " is not prime ");
        }
    }
}
```

O/P = ~~0, 1, 1, 2, 3, 5, 8, 13, 21, 34~~

29 is a prime no.

③ Program to print fibonnacci series

```
class fibonacci_series {
  public static void main (String args[]) {
    int terms = 10;
    int firstTerm = 0, SecondTerm = 1;

    System.out.println ("fibonnaci Series upto" + term + terms);

    for (int i = 1 ; i <= terms; i++) {

      System.out.println (firstTerm + " ");

      int nextTerm = firstTerm + secondTerm;

      firstTerm = secondTerm;

      SecondTerm = nextTerm;
    }
  }
}
```

O/P = 0, 1, 1, 2, 3, 5, 8, 13, 21, 34

④ Program to print a simple interest.

```
public class simple interest {
  public static void main (String args[]) {
    double principal = 1000;
    int time = 3;
    double rate = 5;

    double simpleinterest = (principal * time * rate) /100;

    Syso ("Principal" + Principal);
    Syso (" Rate of interest " + rate);
    Syso ("Time " + time + "Years");
    Syso ("Simpel interest " + simpleinterest);

  }
}
```

O/P = Principal : 1000
Rate of interest : 5.0
Time = 3 Years

(5) Swapping of numbers

```
public class swapping {
    public static void main (String args[]) {
        int a = 5;
        int b = 10;
        Syso ("before swapping");
        Syso ("a =" + a);
        Syso ("b =" + b);
        int temp = a;
        a = b;
        b = temp;
        Syso ("after swapping");
        Syso ("a =" + a);
        Syso ("b =" + b);
    }
}
```

o/p
before swapping
a = 5
b = 10
after swapping
a = 10
b = 5

(6) Triangle :

```
public class triangle {
    public static void main (String args[]) {
        double side1 = 5.0;
        double side2 = 5.0;
        double side3 = 8.0;
        String tringleType = checkTriangleType (side1, side2,
                                                side3);
        Syso ("The triangle is " + triangleType);
    }
    public static String checkTriangleType (double a, double b
                                            double c) {
        if (a <= 0 || b <= 0 || c <= 0) {
            return "sides must be positive";
        }
```

~~if (a <= 10 ||~~

```
if (a == b && b == c ) {
    return "Equilateral";
}
    else if (a == b || b == c || a == c) {
    return "Isosceles";
} else {
    return "Scalene";
}
}
```

o/p The triangle is Isosceles